

Agilent Ref: 10030712-1  
United States Application Serial No. 10/722,950

**AMENDMENTS TO THE CLAIMS**

Please amend the claims as shown below. A complete listing of the claims, including their current status, is set forth below.

1. **(Currently Amended)** A method for treating a backing element comprising a gasket, wherein said backing element is adapted to join with a microarray substrate to form an array assay chamber that is sealed by said gasket, wherein said array assay chamber comprises at least one addressable array on said microarray substrate, said method comprising at least one of: (1) depositing SiO<sub>2</sub> a component on said gasket, (2) extracting a component from contacting said gasket with at least one of a liquid phase and a vapor phase, (3) surface modifying contacting said gasket with plasma, to treat said backing element.

2.-17. **(Canceled)**

18. **(Currently Amended)** The method of Claim 17 Claim 1, wherein said plasma is produced from a gas selected from the group consisting of nitrogen, air, argon, oxygen, nitrous oxide, helium, water vapor, carbon dioxide, methane, and combinations thereof.

19.-26. **(Canceled)**

27. **(Previously Presented)** The method of Claim 1, wherein said treating comprises increasing the hydrophilicity of said gasket.

28. **(Previously Presented)** The method of Claim 1, wherein said treating allows said gasket to form a seal when said backing element is joined to said microarray substrate.

29. **(Previously Presented)** The method of Claim 1, wherein said treating comprises sequentially contacting said gasket with at least two of: plasma, UV with O<sub>2</sub> and a solvent.

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30.-52. (Cancelled)

53. (Currently Amended) A method for treating a backing element comprising a gasket, wherein said backing element is adapted to join with a microarray substrate to form an array assay chamber that is sealed by said gasket, wherein said array assay chamber comprises at least one addressable array on said microarray substrate, said method comprising contacting surface modifying said gasket with plasma to treat said backing element.

54. (Cancelled)

55. (Currently Amended) The method of Claim 54 Claim 53, wherein said plasma is produced from a gas selected from the group consisting of nitrogen, air, argon, oxygen, nitrous oxide, helium, water vapor, carbon dioxide, methane, and combinations thereof.

56. (Cancelled)

57. (Currently Amended) A method of using a backing element, wherein said backing element is adapted to join with a microarray substrate and comprises a gasket, comprising:

contacting surface modifying said gasket with plasma to treat said gasket; and joining said backing element to a microarray substrate to produce an array assay chamber that is sealed by said gasket and comprises at least one addressable array of said microarray substrate.

58. (Cancelled)

59. (Currently Amended) The method of Claim 58 Claim 57, wherein said plasma is produced from a gas selected from the group consisting of nitrogen, air, argon, oxygen, nitrous oxide, helium, water vapor, carbon dioxide, methane, and combinations thereof.

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60. **(Previously Presented)** The method of Claim 57, wherein said surface modifying comprises increasing the hydrophilicity of said gasket.
61. **(Previously Presented)** The method of Claim 57, wherein said surface modifying allows said gasket to form a seal when said backing element is joined to said microarray substrate.
62. **(Previously Presented)** The method of Claim 57, wherein said surface modifying comprises sequentially contacting said gasket with at least two of: plasma, UV with O<sub>2</sub> and a solvent.